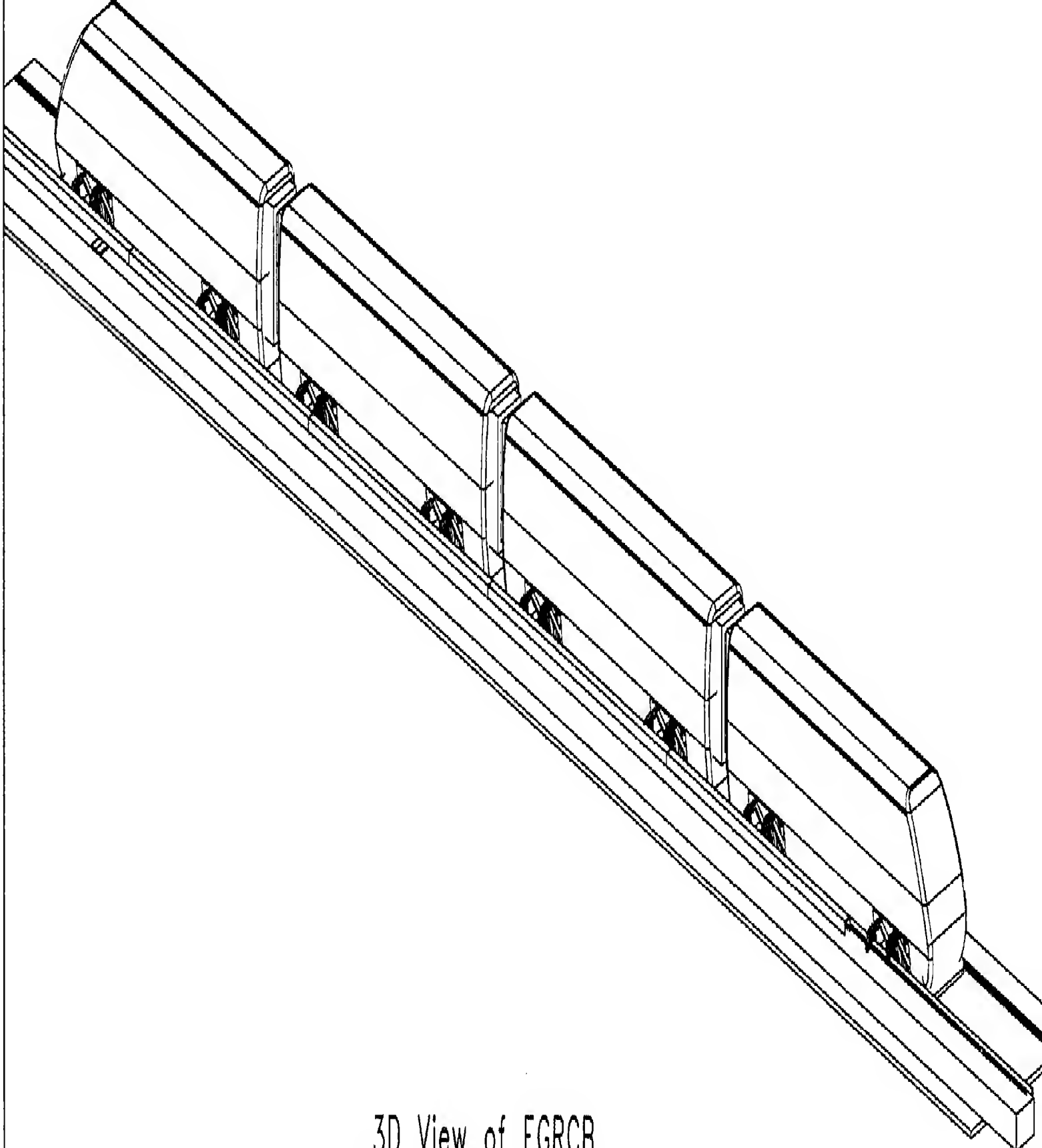
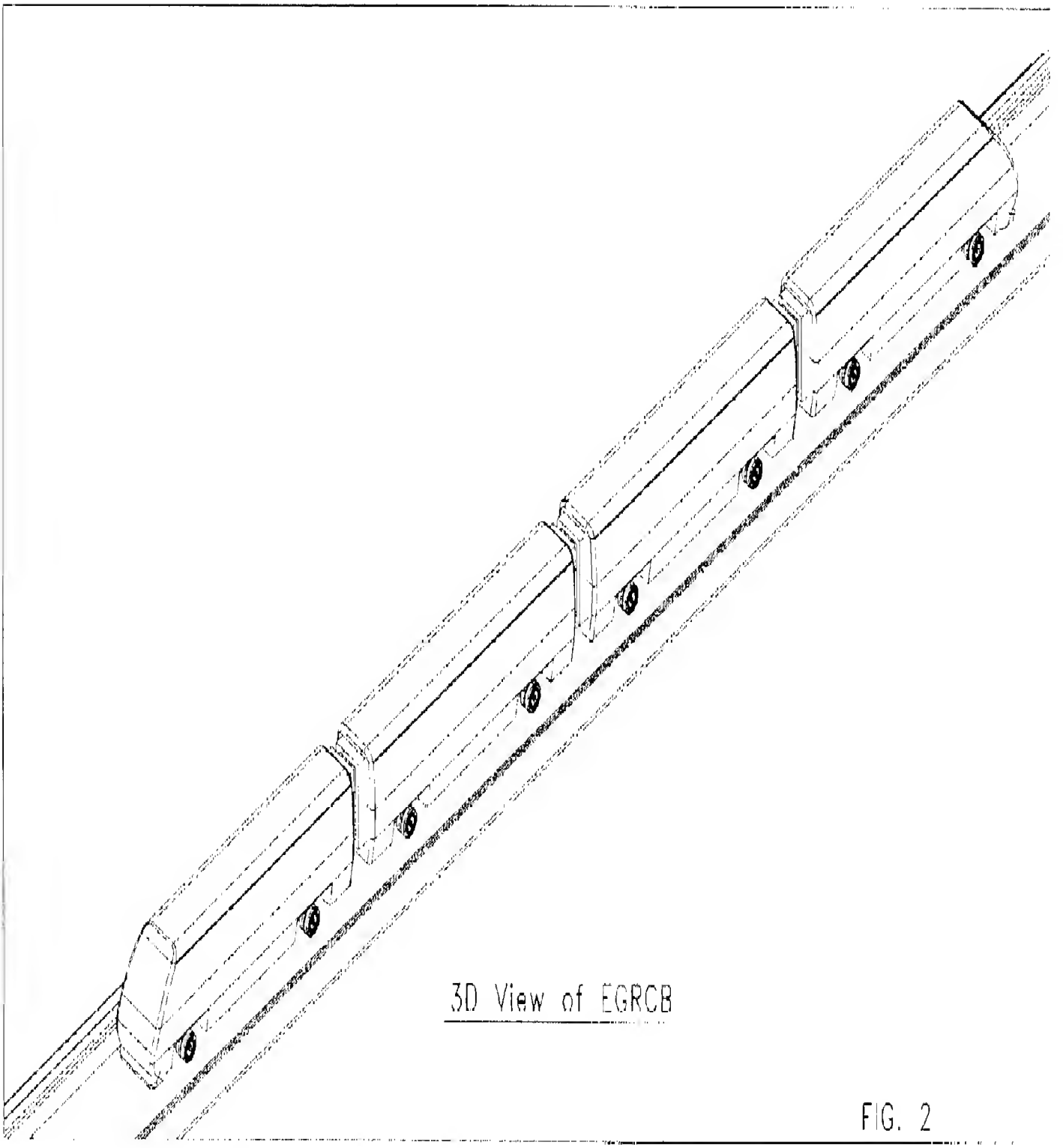


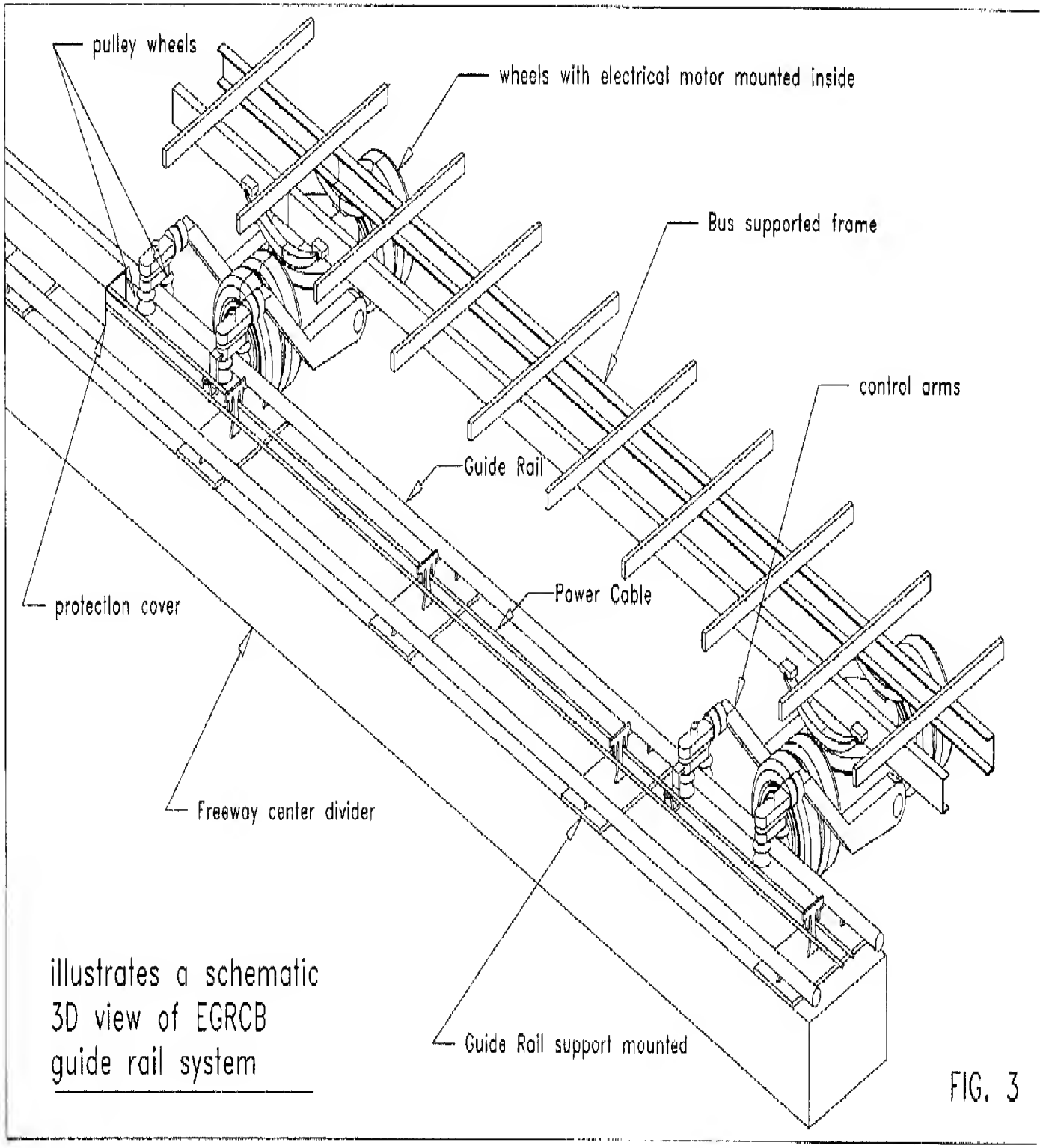
3D View of EGRCB

FIG. 1



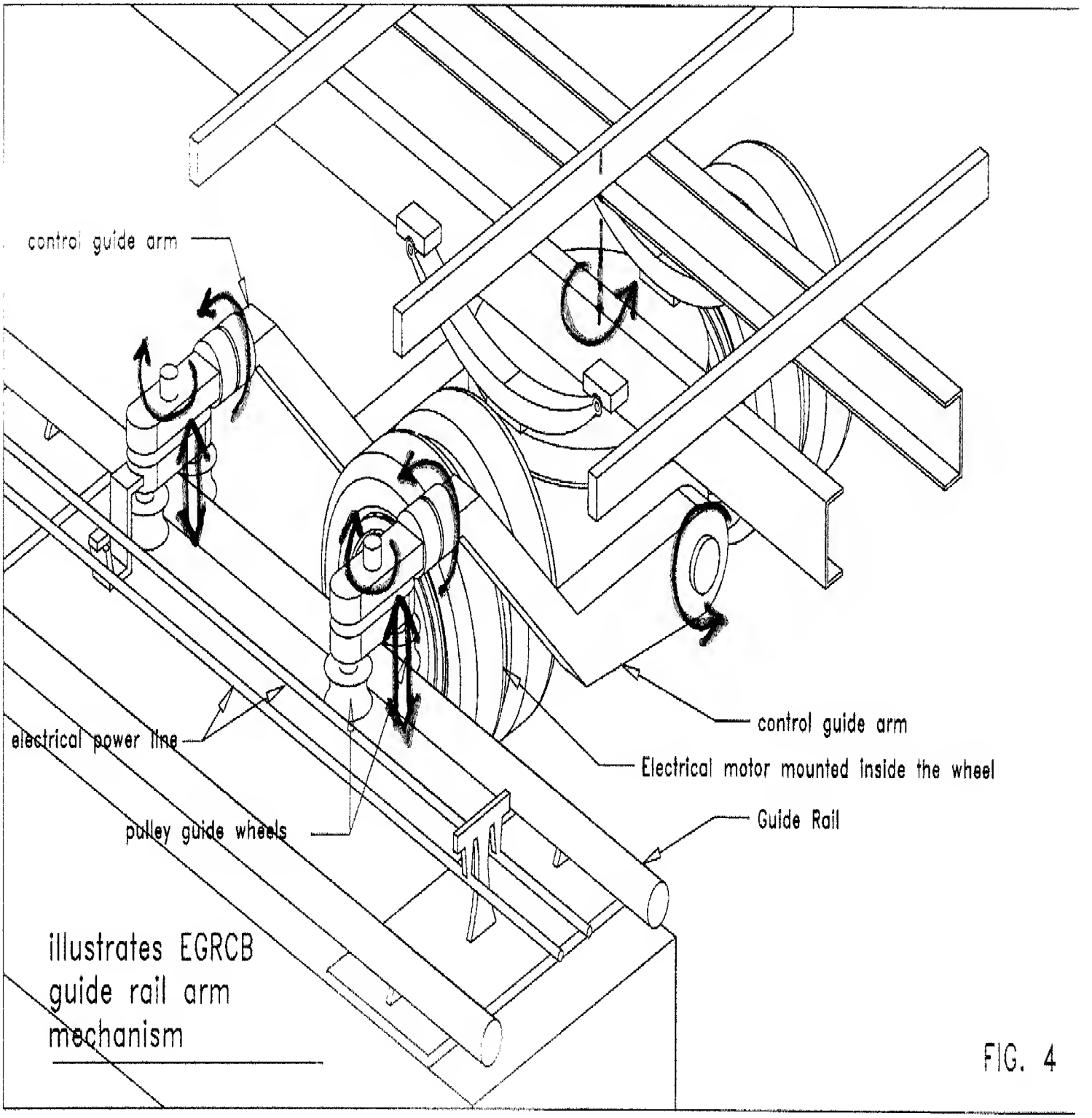
3D View of EGRCB

FIG. 2



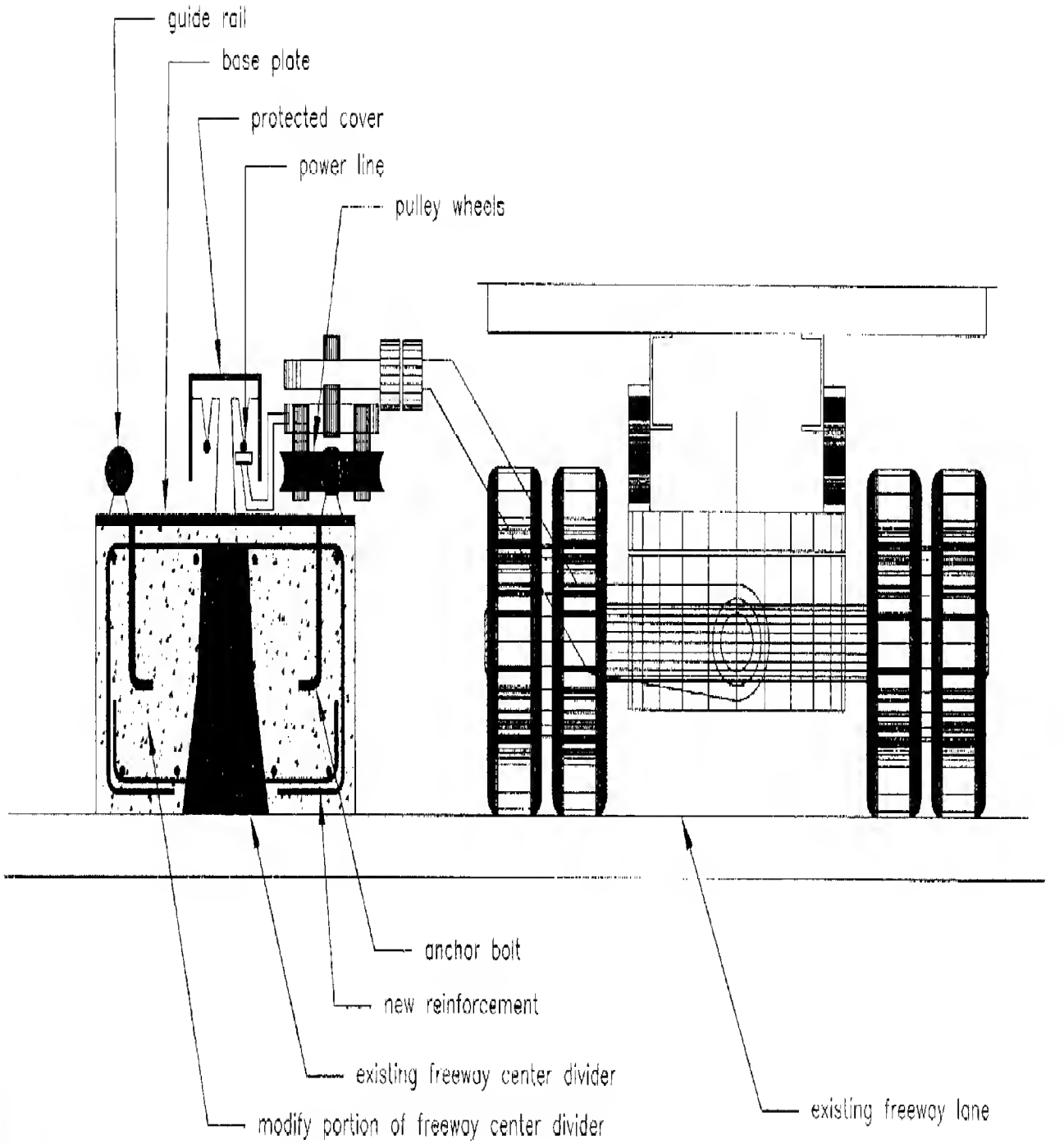
illustrates a schematic 3D view of EGRCB guide rail system

FIG. 3



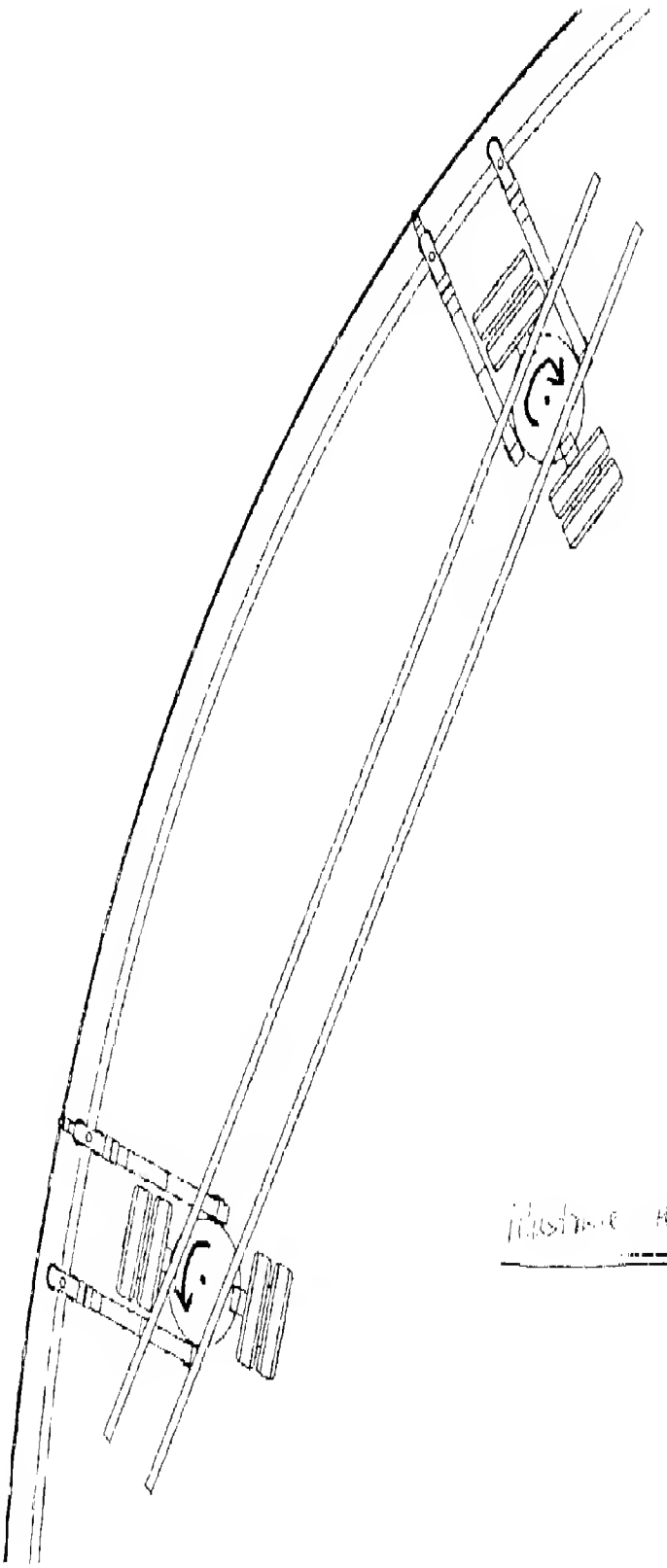
illustrates EGRCB guide rail arm mechanism

FIG. 4

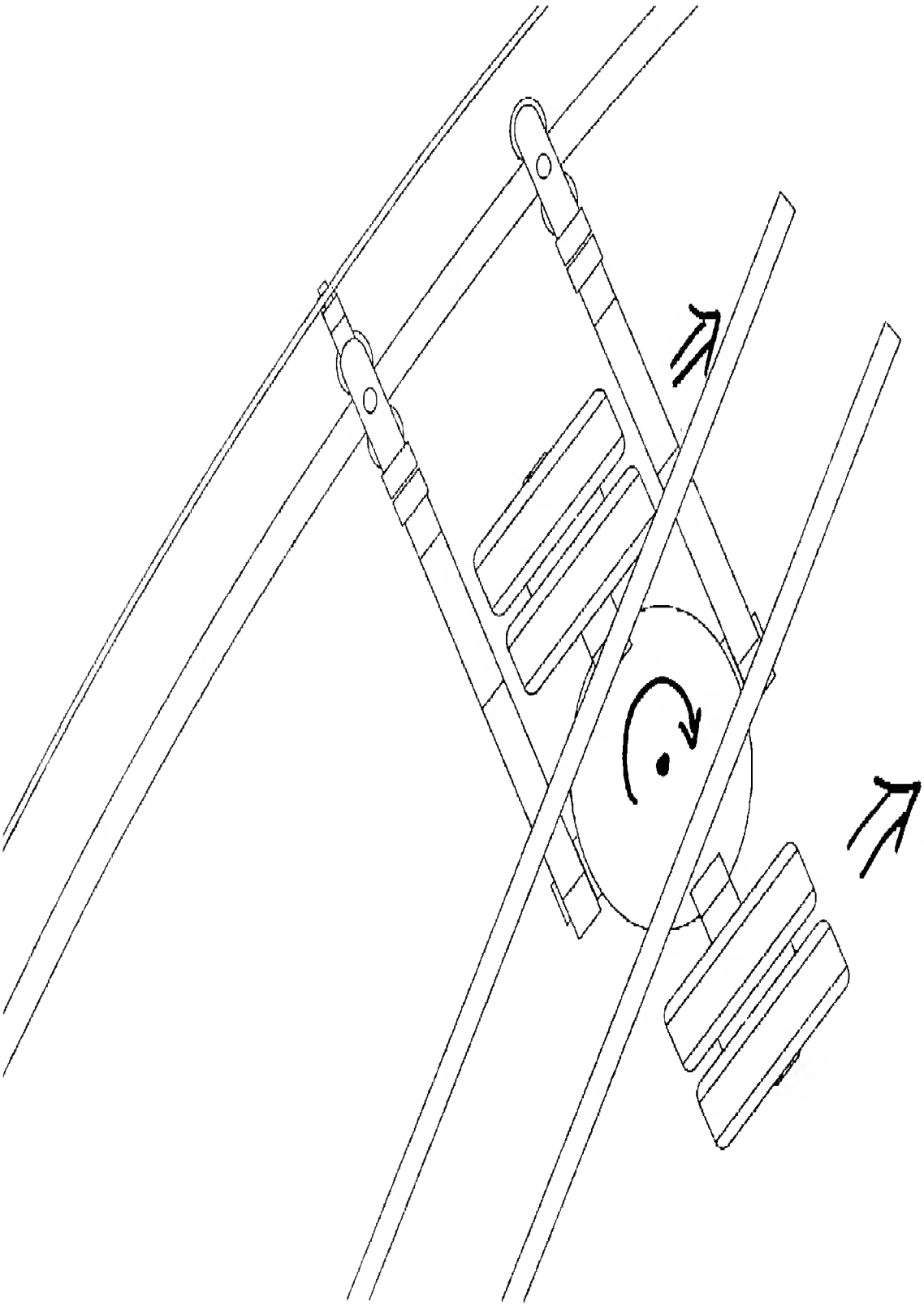


SECTION OF MODIFY FREEWAY CENTER DIVIDER

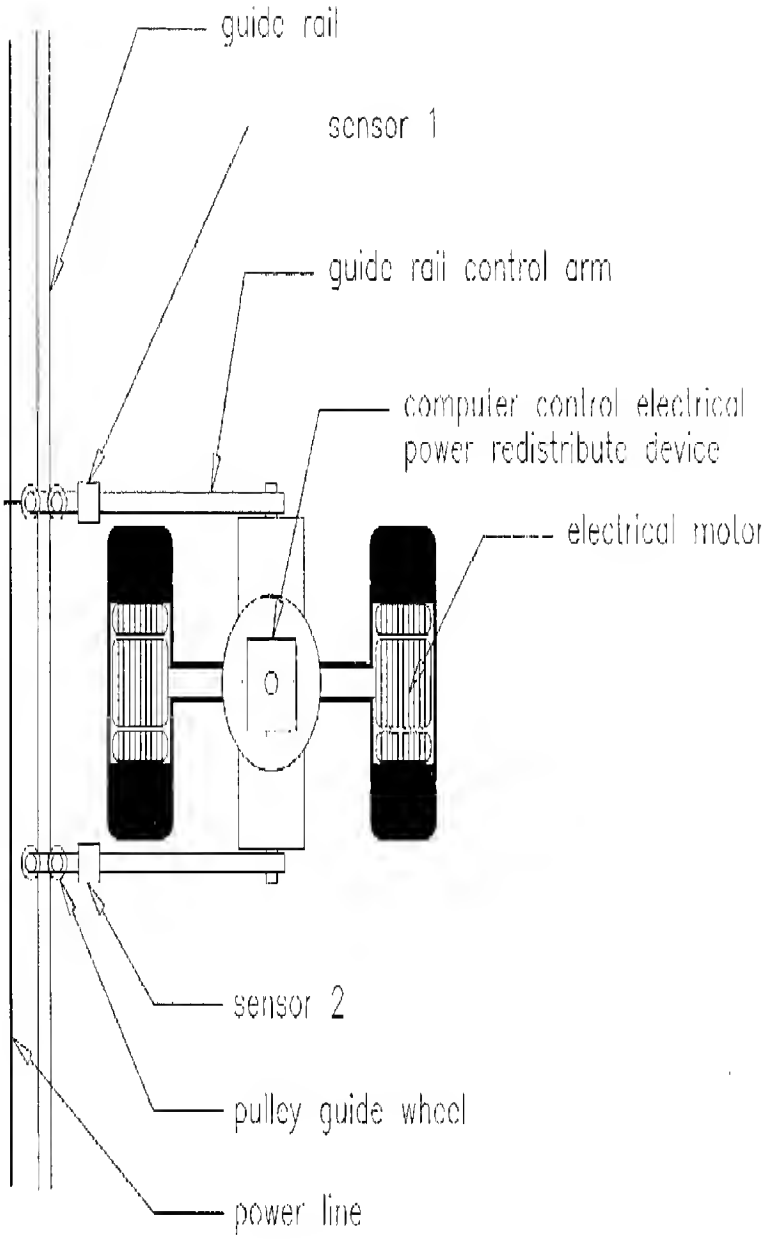
FIG. 5



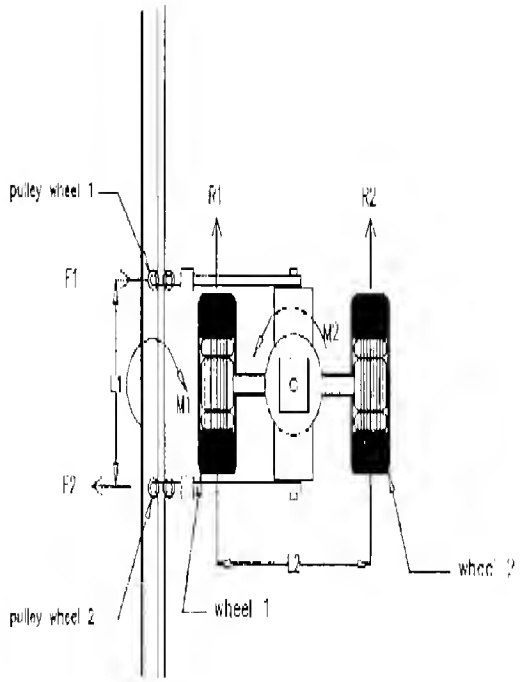
(figure 6)



(figure 7)



ECRCB control illustration diagram



EGRCB control system illustration diagram

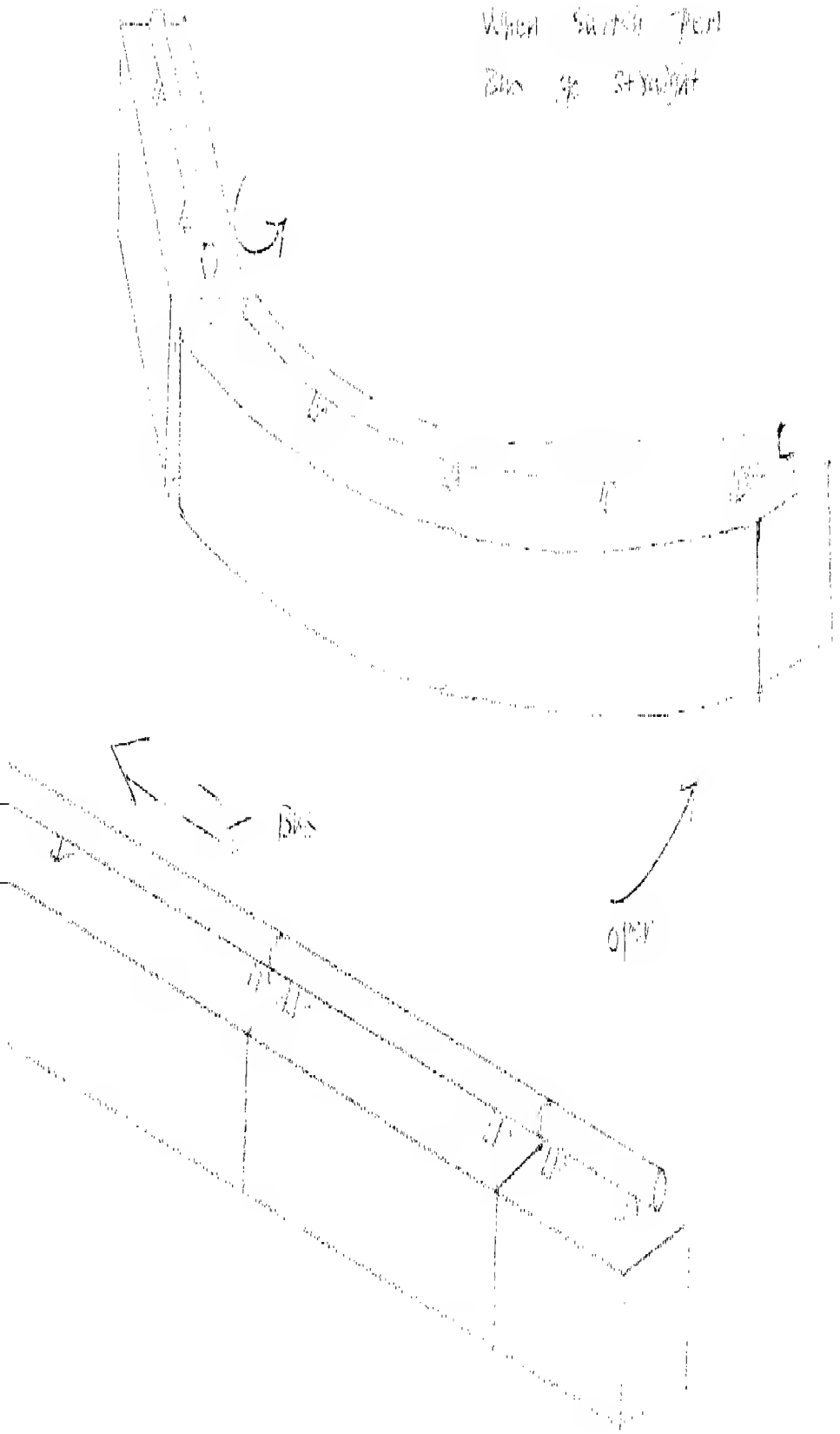
EGRCB control system working concept:

1. if the traction forces in wheel 1 equal to wheel 2 then the moment M2=(R2-R1)*L2=0
   since M1-M2=0 and M1=(F2-F1)*L1=0, so F1=F2 as the result car will go straight ahead.
   at this condition no matter how fast car accelerate it will always go straight.

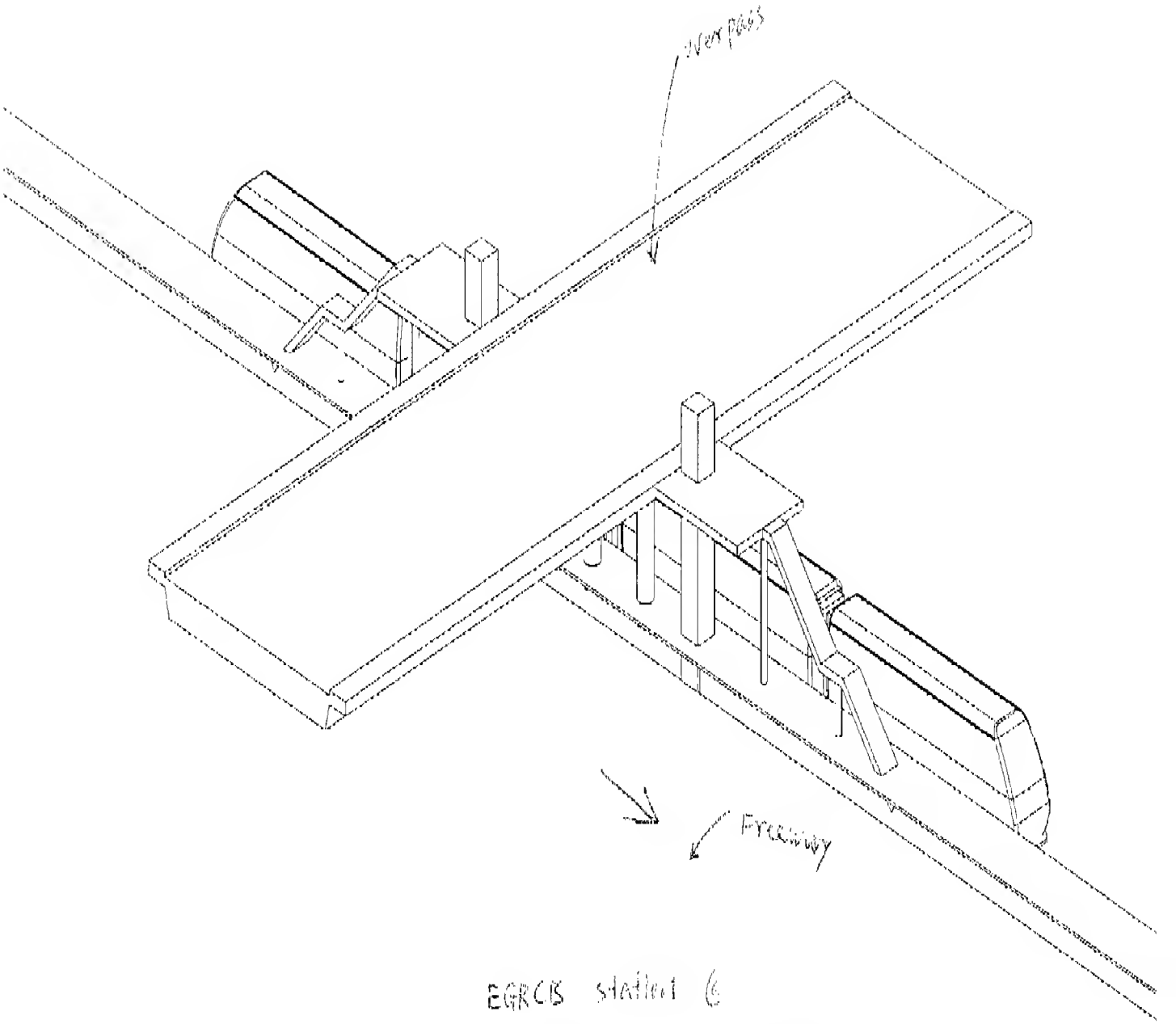
2. if the traction force in wheel 1 is not equal to wheel 2 then M2=(R2-R1)*L2 so wheel axial has a tendency to turn. since the whole wheel set is connect to control arm which is restrain by pulley guide wheel, as result it will generate couple force F1 & F2 to counter the moment M2. M1 has to equal to M2. so (F2-F1)*L1=M1, or (F2-F1)*L1=(R2-R1)*L2, from this equation we can see the relationship between the (F2-F1) and (R2-R1), so we can make the (R2-R1) 0 by changing the traction forces in wheel 1 and wheel 2. to achieve this we can install a force sensor in control arms to monitor the F1 and F2, sensor will send these information to computer control power redistribute device, keeping the total output same just redistribute power in between the wheel 1 (motor 1) and wheel 2 (motor 2). through this process we automatic balance the traction in both wheels.

3. when guide rail start at curve section it will generate a unbalance forces in pulley wheel 1 and pulley wheel 2. this unbalance forces will create a moment M1, this moment will force the wheel set to rotate together with control arms as result the car will follow the guide rail. during this turn process sensor will still working as describe above by redistributing the power between two wheels it help the car to turn along with guide rail and minimize the force in guide rail.

4. to slow down or break the car the reverse process describe above will apply. this break system can proven the cabin bus line buckling during the emergency stop which is very import for this application.



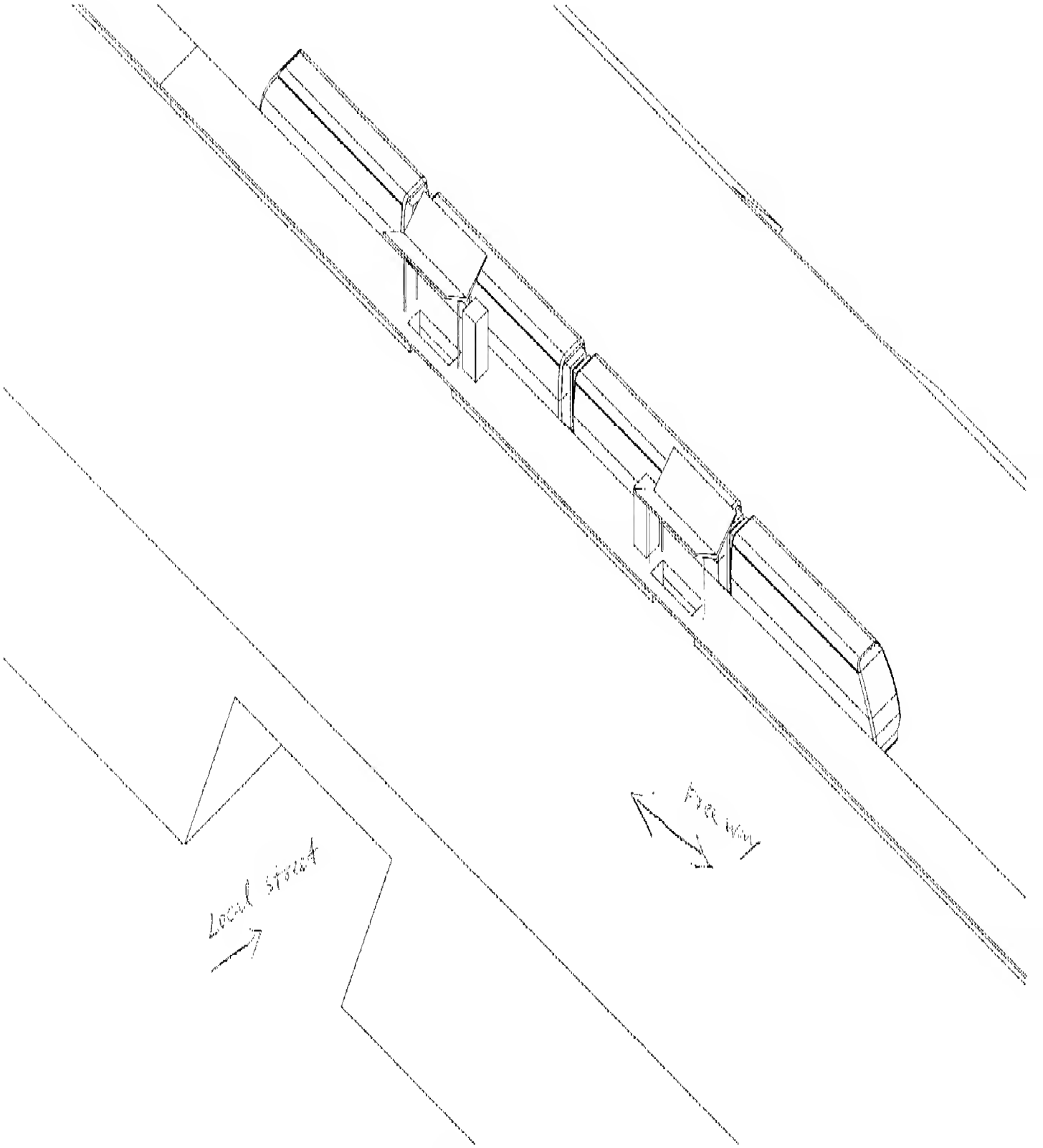
(figure 11)



EGRCB station 6

Local street over pier the freeway

Figure 12



EGRESS Station C

Freeway over pass the Local street

Figure 13